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AF SERIAL NUMBER TRACKING (SNT)

Colquitt Lawrence
AF/ILGP
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Overview

- Mission
- DoD Background
- Unique Item Identification
- AF Background
- Benefits
- Big Picture
- Implementation
- Focus Areas

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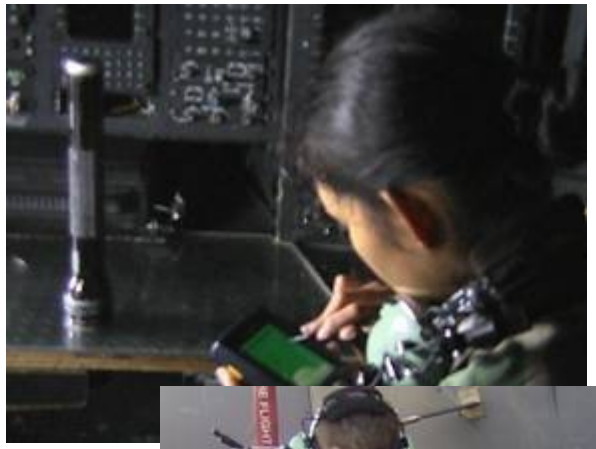
Mission

- **Design and implement an enterprise Serial Number Tracking (SNT) and management capability for the USAF**
- **Coordinate with other organizations and services for DOD SNT program implementation**



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DoD Background

- **Requirements**
  - **ODUSD(L&MR) memo: Serialized Item Management (SIM) of Equipment Maintenance - 4 Sep 02**
  - **ODUSD memo: Policy for Unique Item Identification (UID) of Tangible Items – New Equip, Major Mods and Procurements of Equip and Spares – 29 Jul 03**
  - **UID becomes a mandatory DoD requirement on January 1, 2004**
- **Benefits**
  - **Integration of item data across all agencies, FMEA**
  - **Improved item visibility, management and accountability (CFO Compliance)**

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Unique Item Identification

- What is UID?
  - Discrete item identifier (like a Social Security Nr)
    - Tangible contract deliverables over $5K, serially managed, mission essential, controlled inventory, or determined to require UID by Program Manager
  - UID currently not mandated on in-service assets
- Valuation
  - UID items will have contract line item delivery price
  - UID parts will be individually priced
- SNT will track and analyze select items throughout their life cycles to improve sustainment for warfighter

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USAF Background

- **Requirement**
  - **AF CONOPS for Serial Number Tracking (SNT) and Product Marking signed – 27 Feb 03**
  - **HQ AF/IL letter to MAJCOMS and AFMC/CV – 9 Apr 03**
- **USAF SNT Team**
  - **Design AF SNT program to implement DoD policy**
  - **Co-Championed by HQ AF/ILI, Mr Grover Dunn and OO-ALC/LG, Mr Gene Hathenbruck**
  - **Co-Chaired by AF/ILI, Ms Linda Barnwell and AFMC/LGI, Col Loraine Simard**
- **USAF AIT PMO**
  - **Provide standards and technological options/data collection solutions for marking**

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SNT Benefits

- **Acquisition/Engineering**
  - Part Mark, Birth Certificate, Warranty Management, OSS&E, Configuration Management, Safety of Flight/High Dollar/Time Critical Item Management
- **Supply**
  - Inventory Accuracy, Materials Management, Item Visibility by SN, Fraudulent Part Identification
- **Transportation**
  - In-Transit Visibility, Track Transportation Method/Damages
- **Maintenance**
  - Item Visibility, Cost Control, Repair History, Bad Actor Identification (MTBF), Quality Deficiency Report Tracking, Improved Bills of Material, Engine Stub Time Management
- **Disposal and Reutilization**
  - Hazardous Materials/Precious Metals Tracking, Demilitarization, Prevent Inappropriate Re-entry of Parts – Surplus/Excess

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Big Picture

"Tracking" part of Serial Number Tracking

"Application" enabled by Serial Number Tracking

Automated Information Systems

Manufacture/ Acquisition	Inbound Transportation	Supply	Outbound Transportation	Maintenance	Disposition
Part mark is common thread					
•Production Traceability	• In-Box ITV	• In-Storage visibility	• In-Box ITV	• On/Off Equipment visibility	• Provide item history to buyer
•Birth Record •Warranty •ID Defects •Configuration Mgt	•Locate Asset • Match transportation method to item	•Maintenance pull by S/N •Locate Asset •Capital Reporting •In-use Equip	•Locate Asset •Match transportation method to item	•Trend analysis •Manage configuration •Warranty •Bad Actors •Locate Asset	•Properly DEMIL
• SAP • G009	• CMOS • GATES • GTN	• SATS • ILS-S • SCS	• CMOS • GATES • GTN	• G081 • CEMS • CAMS	• DRMO •ITS, PDMSS

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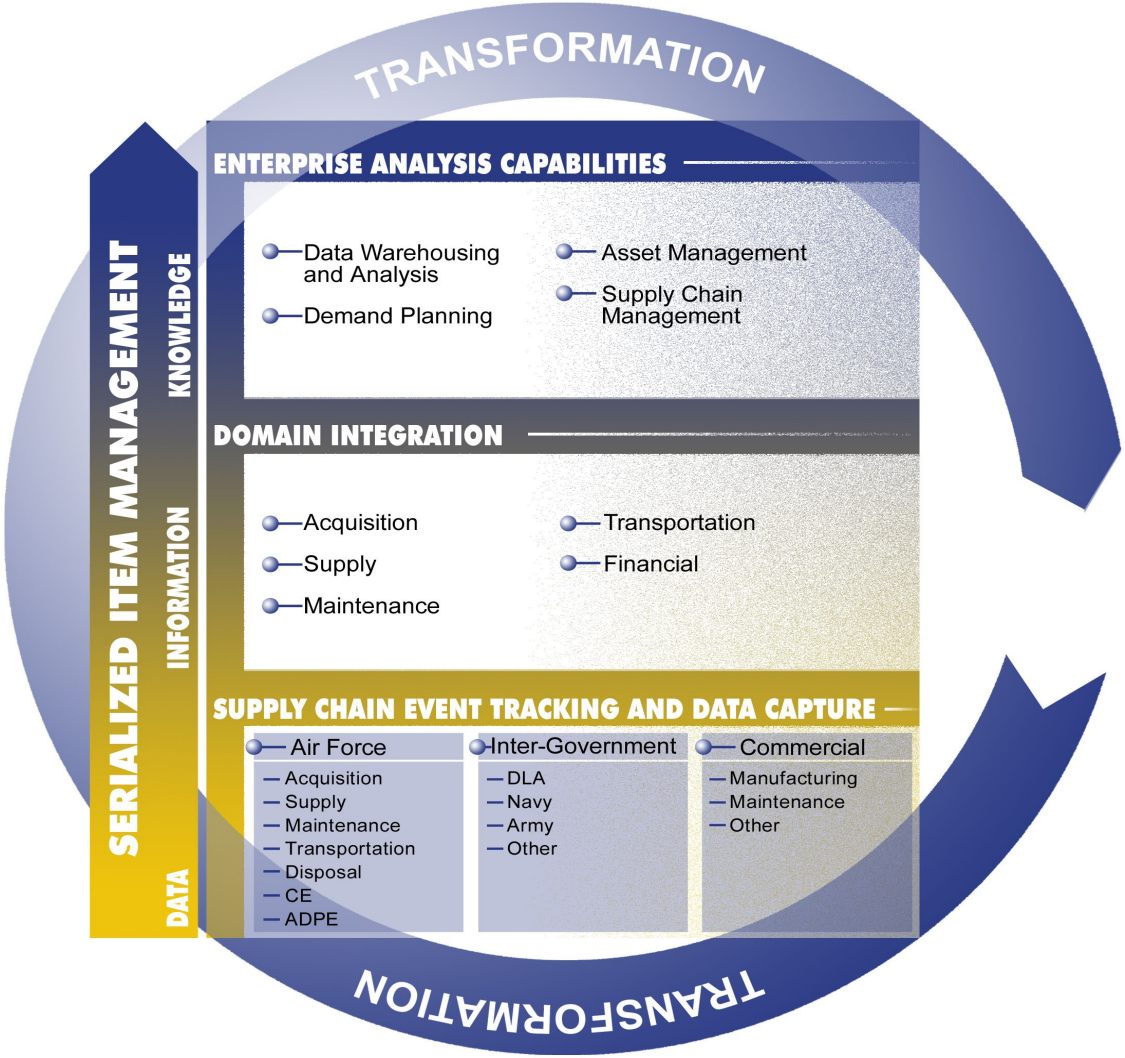
Operational Architecture

- **Supply Chain Event Tracking**
- **Domain Integration**
- **Enterprise Analysis Capabilities**
- **Serialized Item Management**
- **Transformation**



Systems Architecture

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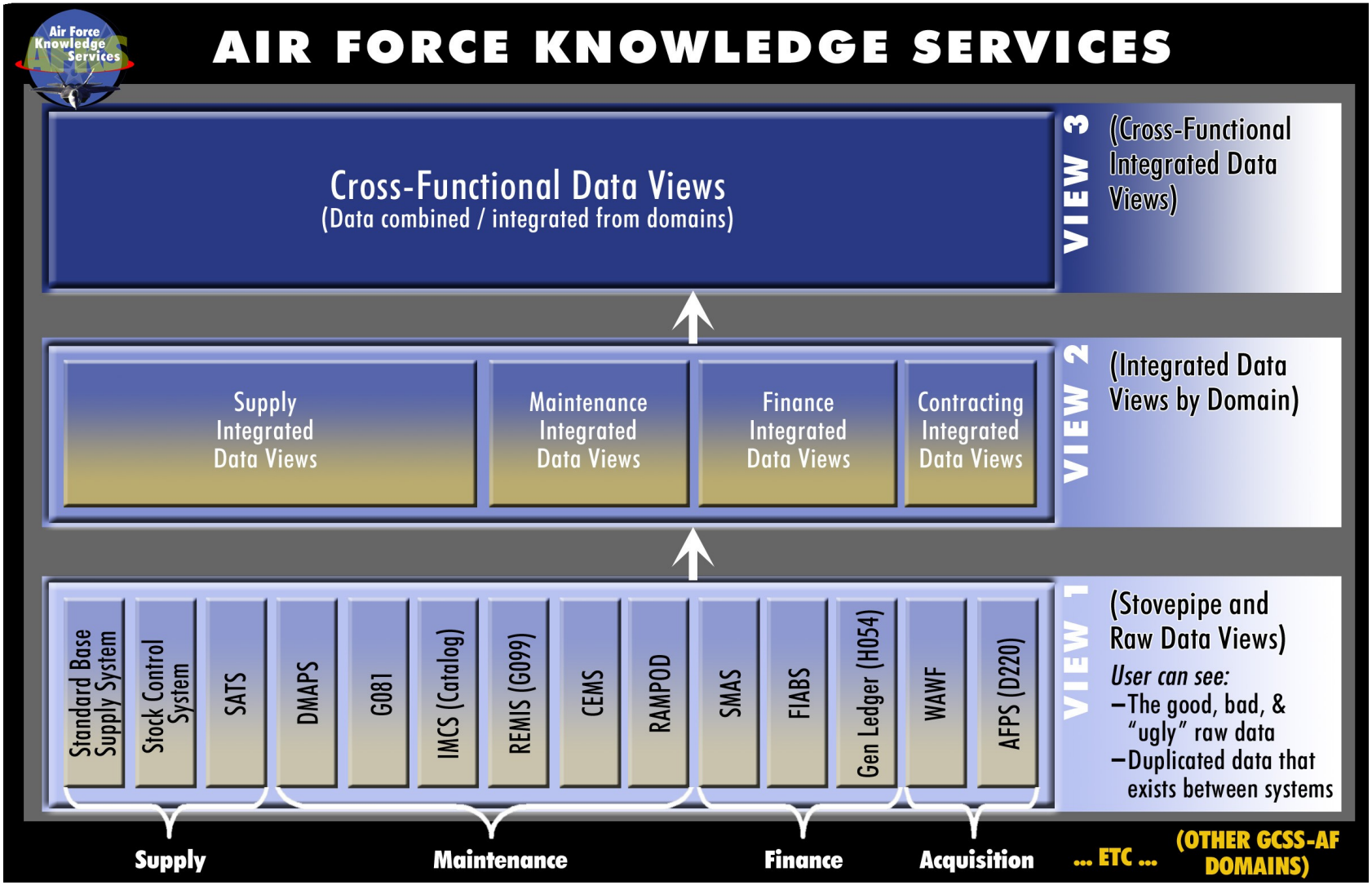

SNT Implementation

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Analysis Completed	Recommendations Completed	Initial System Development	Implementation Phases (Subject to Funding)
Mar – Jun 03	Jul 03	Aug 03 – May 04	Jun 04 – Dec 11

Analysis
- Draft Charter
- Draft Roadmap
- Review Existing Requirements
  - AF, DoD, DLA, Other Services
- Determine "As Is"
  - Analyze Current Processes
- Design "To Be"
  - Review existing programs
  - Determine Implementation order
  - Estimate Benefits

Initial Draft Implementation Plan
- SNT Analysis
- Communication Plan
- Integration Plan
- Requirements
  - Hardware/Software
  - Marking Quality Compliance
  - Training

Concept Demonstration
- Data/System Interactions
- Operational Simulations

Pilot Program
- Draft Pilot Programs
- Funding Estimates
- Coordinate w/ MAJCOMs

Deliverables
- Policy Guidance
- Refined Requirements
- FY06 POM Input
- Business Case Study
- Cost and schedule
- Final Imp Plan

Spiral Implementation
- **Phase 1 – Tracking and some analytical capability**
  - May 04 – Dec 05
  - Quick wins/"low fruit"
  - Initiate Pilots
  - Analyze Concept Demo
  - Update Imp Plan
  - Stand-up PMO
- **Phase 2 – More analytical capability**
  - Jan 06 – Dec 07
  - Important/Time consuming interfaces
- **Phase 3 – The rest of the analytical capability**
  - Jan 08 – Dec 11
  - Complex/Enterprise

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Focus Areas

Systems Integration

Funding

Concept Demonstration

Pilot Programs

AF SNT Program Office

Funding

- Determine SNT funding requirements
  - Implementation Plan
    - Systems cost estimates
  - Business Case Analysis
    - Workshop results
    - Survey results
    - Return on Investment estimates
- Acquire funding for SNT implementation
  - FY04 and FY05 fallout funds
  - FY06 POM input

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Systems Integration

- Major AF Logistics Transformation Initiatives
  - PSCM, DMT, SC COP, LOG EA, etc
- Integration with legacy systems
  - REMIS, CEMS, ITS, CAMS, CMOS, SBSS, etc
- New evolving systems
  - EDW, ERP, MRO, APS, etc
- Locally developed SNT systems
  - DRILS, LDMS, C-5, C-17, etc
- DoD, DLA and Service SNT programs
  - UID, UITC, US Navy, US Army, etc

Acronym Test

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Concept Demonstration

- Alternatives on processes, people, equipment
- Simulates SNT process flows, resource profiles
  - Flow of arriving assets to be marked
  - Type of marking on asset
  - Time required to mark and verify
  - Engineering requirement
  - Rate of assets through the supply chain that require serial number scanning
- Supports planning for SNT implementation throughout AF logistics business processes

Pilot Programs

- **Proposed pilot candidates**
  - **C-17 avionics (CLS/TSPR)**
  - **C-5 landing gear (organic depot)**
  - **F-15/F-16 avionics (organic depot)**
- **Pilot concept includes**
  - **DRILS (F-16) and LDMS (F-15) interfaces, other data systems as required**
  - **Depot/contractor interface**
  - **Base level (maintenance/supply/transportation)**
  - **Incorporates UID/AIT policy**
- **Depth of pathfinders dependent upon funding**

CLS = Contr Log Support
TSPR = Tot Sys Perf Responsibility

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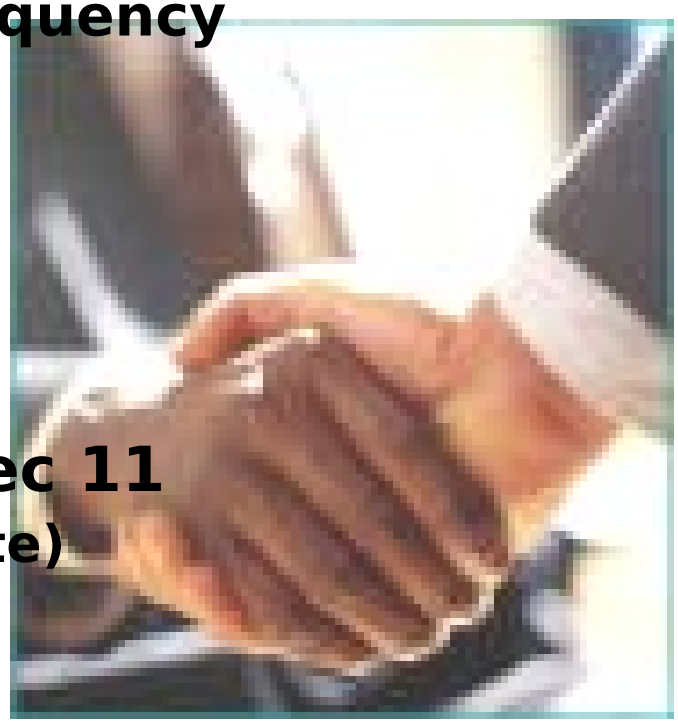
AF SNT Program Office

- **Scope requires more than part time efforts**
  - **Integration of program with DoD, Services, AF, MAJCOMs, industry**
  - **Implement SNT, UID, Radio Frequency Identification (RFID) across AF**
- **Initial resources for SNT PMO**
  - **1 Mil, 3 Civ, 10 Contr**
  - **$2.4M per year**
- **Possible location: HQ AFMC**
- **Desired timeframe: Jan 04 – Dec 11**
  (or after implementation is complete)



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SNT Summary

- Major logistics transformation initiative
- AF/ILI and AFMC/LG lead
- Huge benefits across supply chain
- Significant implementation issues
- On track

Questions?